

REMARKS

This Amendment is responsive to the August 25, 2009 Office Action. Claims 18, 25, 27, and 38 have been amended, claims 35 and 36 have been cancelled, and claim 39 has been added. Support for the amendment to claim 18 may be found, for example, in originally-filed claim 1 and in the specification at page 2, lines 4-17. Support for the amendment to claims 25 and 27 may be found, for example, in Fig. 2 and in the specification at page 6, lines 18-24. Support for the amendment to claim 38 may be found, for example, in Fig. 4, in originally-filed claim 1, and in the specification at page 2, lines 4-17 and page 6, line 31 to page 7, line 2. Support for new claim 39 may be found, for example, in originally-filed claim 8, in Fig. 4, and in the specification at page 6, line 31 to page 7, line 2. Claims 18-27, 29-31, 38, and 39 will be pending in this application upon entry of this Amendment.

Rejections Under 35 U.S.C. §102 and 35 U.S.C. §103

Claims 18-27, 29-30 and 38 stand rejected under 35 U.S.C. § 102(b) for anticipation by United States Patent Application Publication No. 2001/0020409 to Hashimoto. Claims 25, 27 and 29-31 stand rejected under 35 U.S.C. § 102(b) for anticipation by United States Patent No. 5,136,907 to Bakermans et al. Claims 29-31 stand rejected under 35 U.S.C. § 103(a) for obviousness over Hashimoto in view of JP 07 132497 to Isamu. In view of the following remarks, reconsideration of these rejections is respectfully requested.

Amended independent claim 18 recites, *inter alia*:

..carrying the stamp, after performing a punching operation on a sheet material, with the active stroke at least partially through a cutting opening in a cutting plate supporting the sheet material; carrying the stamp during the return stroke back again through the cutting opening in the cutting plate which close-fittingly encloses the stamp; and scraping a slug adhering to the stamp during the return stroke with a side of the cutting plate remote from the side supporting the sheet material such that the slug is released from the stamp.

Applicants respectfully submit that the Hashimoto reference fails to disclose or suggest scraping a slug adhering to the stamp during the return stroke with a side of the cutting plate remote from the side supporting the sheet material such that the slug is released from the stamp as recited in independent claim 18.

In the *Response to Amendment* section of the Office Action at page 8, the Examiner continues to assert that the cutting edge portion (3a) of the die (3) in Hashimoto teaches a cutting plate having a scraping edge as in the claimed invention. In particular, the Examiner asserts “[t]he bottom edge of the cutting edge 3a of the cutting plate 3 blocks a chad or a small metal piece attached to the punch 2 during the return stroke of the punch.” The Examiner contends “[i]f there is a chad or slug that is adhered to the stamp 2 of Hashimoto’s punching machine naturally will be scraped or removed by the edge 3a as the stamp 3 moves upwardly and the chad or slug contacts the edge 3a.” The Hashimoto reference, however, fails to expressly recite that the cutting edge portion (3a) is a scraping edge or scrapes a slug adhering to the stamp during the return stroke with a side of the cutting plate remote from the side supporting the sheet material as in the claimed invention. Accordingly, the Examiner appears to be asserting that the cutting edge portion (3a) of the die (3) in Hashimoto inherently discloses a scraping edge as in the present invention.

In order to establish inherency, the allegedly inherent feature must necessarily flow from the teaching of the prior art and may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. *See MPEP § 2112*. Applicants respectfully submit that the Examiner has failed to establish that the cutting edge portion (3a) of Hashimoto would inherently scrape a slug adhering to the stamp during the return stroke to release the slug from the stamp as recited in independent claim 18. The express teaching of Hashimoto stating that the lower portion of the cutting edge portion (3a) of the die (3) is set at a value slightly larger than the inner diameter of the bore of the die (3) to permit a chad to freely drop out of the undercut portion (3b) (see paragraph [0064] of Hashimoto) establishes that the edge portion (3a) does not necessarily function as a scrapping edge. The Examiner at page 9 of the Office Action states “Hashimoto does not disclose that the edge 3a is not capable of scraping metal or small pieces of workpiece that is attached to the punch while the punch is retracted upwardly.” Applicants respectfully submit that the absence of disclosure in Hashimoto stating what the apparatus is not capable of accomplishing (*e.g.*, the edge not being capable of scraping metal from the punch) is not sufficient to establish that the edge (3a) of Hashimoto would inherently scrape a slug adhering to the stamp as in the claimed invention.

Therefore, for at least the foregoing reasons, the Hashimoto reference fails to disclose all of the limitations of independent claim 18.

Amended Independent claim 25 recites, *inter alia*:

...wherein the cutting opening in the cutting plate has a scraping edge for releasing the slug adhering to the stamp, wherein the cutting plate is adapted to support a material layer for processing, and a side of the cutting plate opposite from the side supporting the material layer is substantially non-parallel relative to the side of the cutting plate supporting the material layer such that only a part of a periphery of the slug adhering to the stamp is released by the scraping edge.

The Hashimoto reference and the Bakermans patent fail to disclose or suggest a cutting opening in the cutting plate having a scraping edge for releasing the slug adhering to the stamp as recited in independent claim 25.

For the reasons discussed above in connection with independent claim 18, the Hashimoto reference fails to disclose a cutting plate having a scraping edge for releasing the slug adhering to the stamp as in the claimed invention. The Bakermans patent discloses a die plate for a stamping press having a camming rib (36) extending from one surface (29) of the die plate to the other (31) (see Fig. 4). The camming rib (36) prevents slug pulling when the punch returns from the extended position to the retracted position by causing the slug to become wedged in the die opening and to effectively move the slug laterally across the leading edge of the punch to overcome any surface tension causing the slug to adhere to the face of the punch. In another embodiment, the die opening (44) is tapered and a rib (48) is provided on the internal wall (46) of the cutting opening that extends at an inclined angle, but generally operates in the same manner as the rib (36) discussed above (see Fig. 9). At page 5 of the Office Action, the Examiner asserts that the rib (48) of Bakermans discloses a scraping edge and that the internal wall (46) of the cutting opening discloses a side of the cutting plate remote from the side supporting the material layer as recited in independent claim 25. As noted above, however, the rib (48) is not a scraping edge, but rather acts as a cam to cause the slug to become wedged in the die opening and move the slug across the leading edge of the punch. Thus, the Bakermans patent fails to disclose a scraping edge as recited in independent claim 25.

Moreover, Hashimoto and Bakermans fail to disclose or suggest where a side of the cutting plate opposite from the side supporting the material layer is substantially non-parallel relative to the side of the cutting plate supporting the material layer such that only a part of a periphery of the slug adhering to the stamp is released by the scraping edge as recited in independent claim 25. Referring to Fig. 2 of the present application, for example, the side of the cutting plate (13) remote from the side supporting the material layer (4) is substantially non-parallel relative to the side of the cutting plate supporting the material layer (4) such that only a part of a periphery of the slug (15) adhering to the stamp (2) is released. As shown in Fig. 4 of Hashimoto, the side of the cutting plate opposite from the side supporting the material layer in Hashimoto includes a portion that is parallel to the side supporting the material. In particular, the portion of the cutting plate adjacent to the alleged scraping edge (3a) of Hashimoto is parallel to the side supporting the material layer. Further, the internal wall (46) of the cutting opening in the Bakermans patent is not positioned opposite from the surface (29) supporting a material layer and fails to disclose a side of the cutting plate opposite from the side supporting the material layer that is substantially non-parallel relative to the side of the cutting plate supporting the material layer as in the claimed invention.

Therefore, for at least the foregoing reasons, the Hashimoto reference and the Bakermans patent fail to disclose all of the limitations of independent claim 25.

Further, claims 19-24, 26, 27 and 29-31 indirectly or directly depend from and add further limitations to either independent claim 18 or independent claim 25. Thus, claims 19-24, 26, 27 and 29-31 are deemed to be in condition for allowance for all of the reasons set forth hereinabove.

Amended independent claim 38 recites, *inter alia*:

...carrying the stamp, after performing a punching operation on a sheet material, with the active stroke at least partially through a cutting opening in a cutting plate supporting the sheet material, the cutting opening having an open side, a side of the cutting plate that defines the open side of the cutting opening extending from a side of the cutting plate supporting the sheet material and tapering inwardly from the side of the cutting plate supporting the sheet material to define a chamfered groove; displacing a slug adhering to the stamp within the chamfered groove; carrying the stamp during the return

stroke back again through the cutting opening in the cutting plate which close-fittingly encloses the stamp; and scraping a slug adhering to the stamp during the return stroke with the cutting plate, wherein the stamp is carried through the cutting opening in the cutting plate during the punching operation such that only a portion of the slug is released from the cutting plate.

The cited references fail to disclose or suggest a cutting opening having an open side with a side of the cutting plate that defines the open side of the cutting opening extending from a side of the cutting plate supporting the sheet material and tapering inwardly from the side of the cutting plate supporting the sheet material to define a chamfered groove and displacing a slug adhering to the stamp within the chamfered groove as recited in amended independent claim 38. Although the rib (48) and internal wall (46) of Bakermans extend at an angle, the rib (48) and wall (46) of Bakermans fail to disclose or suggest a cutting opening having an open side and a chamfered groove as recited in independent claim 38. As shown in Fig. 4 of the present application, for example, the stamp (24) presses a slug (25) along an arrow (P4) through a chamfered groove (26) with the slug (25) being prevented from returning due to the expansion of a portion of the slug (25). Therefore, Applicants respectfully submit that amended independent claim 38 is patentable over the cited references.

Reconsideration and withdrawal of these rejections are respectfully requested.

New Claim 39

Claim 39 has been added by the foregoing amendment and recites, *inter alia*:

...a cutting plate defining a cutting opening, the cutting plate having a top surface configured to support a material layer for processing; and at least one stamp for linear intermittent displacement which is displaceable between a position in which the cutting opening in the cutting plate is left clear by the stamp and a position in which the stamp is carried through the cutting opening, and wherein the stamp passes close-fittingly through the cutting opening of the cutting plate, the cutting opening having an open side, a side of the cutting plate that defines the open side of the cutting opening extending from the top surface of cutting plate and tapering inwardly from the top surface of the cutting plate to define a chamfered groove, the side of the cutting plate that defines the open side of the cutting opening forms a scraping edge for releasing a slug adhering to the stamp.

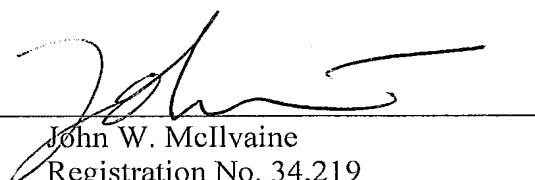
For the reasons discussed above in connection with independent claim 38, the cited references fail to disclose or suggest a cutting opening having an open side, a side of the cutting plate that defines the open side of the cutting opening extending from the top surface of the cutting plate and tapering inwardly from the top surface of the cutting plate to define a chamfered groove, and the side of the cutting plate that defines the open side of the cutting opening forming a scraping edge for releasing a slug adhering to the stamp as recited in independent claim 39. Therefore, independent claim 39 is believed to be in condition for allowance.

CONCLUSION

In view of the foregoing amendments and comments, Applicants respectfully request reconsideration of the rejections and allowance of pending claims 18-27, 29-31, 38, and 39.

Respectfully submitted,
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